10031636

Freeform Search

Database: US Pre-Grant Publication Full-Text Database; US Patents Full-Text Database; US OCR Full-Text Database; EPO Abstracts Database; JPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Term: L7 and (separat$3 or isolat$3)

Display: 10 **Documents in Display Format:** - **Starting with Number** 31

Generate: ○ Hit List ◉ Hit Count ○ Side by Side ○ Image

Search Clear Interrupt

Search History

DATE: Monday, February 09, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ			
L8	L7 and (separat$3 or isolat$3)	10	L8
L7	modif$4 near5 hydroxyl near5 RNA	15	L7
L6	L5 and hydroxyl	37	L6
L5	L4 and (separat$3 or isolat$3)	40	L5
L4	l1 and ribose ring$1	41	L4
L3	l2 and (separat$3 or isolat$3)	1	L3
L2	L1 and hybroxyl	1	L2
L1	modif$4 near5 RNA	4339	L1

END OF SEARCH HISTORY

10031636

Freeform Search

Database: US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Term: 15 and OH

Display: 10 **Documents in Display Format:** - **Starting with Number** 31

Generate: ○ Hit List ◉ Hit Count ○ Side by Side ○ Image

Search Clear Interrupt

Search History

DATE: Monday, February 09, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ			
L8	l5 and OH	31	L8
L7	L6 and (separat$3 or isolat$3)	1	L7
L6	modif$4 near5 RNA near5 ribose ring$1	1	L6
L5	L4	40	L5
L4	L3 and (isolat$3 or separat$3)	40	L4
L3	L2 and ribose ring$1	41	L3
L2	modif$4 near5 RNA	4339	L2
L1	modif$4 nea5 ribose rings	0	L1

END OF SEARCH HISTORY

Freeform Search

Database: US Pre-Grant Publication Full-Text Database; US Patents Full-Text Database; US OCR Full-Text Database; EPO Abstracts Database; JPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Term: L9 and RNA

Display: 10 **Documents in Display Format:** - **Starting with Number** 31

Generate: ○ Hit List ◉ Hit Count ○ Side by Side ○ Image

Search Clear Interrupt

Search History

DATE: Monday, February 09, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ			
L10	L9 and RNA	10	L10
L9	Goldsborough.in.	149	L9
L8	l5 and OH	31	L8
L7	L6 and (separat$3 or isolat$3)	1	L7
L6	modif$4 near5 RNA near5 ribose ring$1	1	L6
L5	L4	40	L5
L4	L3 and (isolat$3 or separat$3)	40	L4
L3	L2 and ribose ring$1	41	L3
L2	modif$4 near5 RNA	4339	L2
L1	modif$4 nea5 ribose rings	0	L1

END OF SEARCH HISTORY

First Hit

L8: Entry 30 of 31 File: DWPI Dec 14, 2000

DERWENT-ACC-NO: 2001-061715
DERWENT-WEEK: 200218

TITLE: Isolation of RNA in samples, by reaction of ribose hydroxy groups to form a derivative with a definite property, and separation based on that property, use for human, animal, or plant cells, or to examine for infective vectors in these

INVENTOR: GOLDSBOROUGH, A S

PATENT-ASSIGNEE: CYCLOPS GENOME SCI LTD (CYCLN)

PRIORITY-DATA: 1999GB-0010158 (April 30, 1999), 1999GB-0010154 (April 30, 1999), 1999GB-0010156 (April 30, 1999), 1999GB-0010157 (April 30, 1999)

Search Selected | Search ALL | Clear

PATENT-FAMILY:

	PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
☐	WO 200075302 A2	December 14, 2000	E	071	C12N015/10
☐	EP 1177281 A2	February 6, 2002	E	000	C12N015/10
☐	AU 200047674 A	December 28, 2000		000	C12N015/10

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200075302A2	May 2, 2000	2000WO-GB01684	
EP 1177281A2	May 2, 2000	2000EP-0929666	
EP 1177281A2	May 2, 2000	2000WO-GB01684	
EP 1177281A2		WO 200075302	Based on
AU 200047674A	May 2, 2000	2000AU-0047674	
AU 200047674A		WO 200075302	Based on

INT-CL (IPC): C07 H 1/08; C12 N 15/10

RELATED-ACC-NO: 2000-679754;2001-061717 ;2002-122127

ABSTRACTED-PUB-NO: WO 200075302A

BASIC-ABSTRACT:

NOVELTY - Preparing an oligo- or poly- nucleotide RNA from a sample, comprising treating with a reactant which covalently modifies at least some of the ribose 2'-hydroxy groups and also has a definite property, and separating the modified RNA on the basis of that property, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a kit for the preparative isolation of RNA comprising an oligo- or poly-nucleotide from a sample, comprising:

(a) a reaction system for modifying the RNA to form a modified oligo- or poly-nucleotide where at least one of the 2'-OH positions of the ribose ring is substituted; and

(b) a separation system for isolating RNA by separating material containing the substituent from the sample; and

(2) a preparative device for isolating RNA comprising an oligo- or poly-nucleotide from a sample, comprising:

(a) a sample extractor;

(b) a reaction system for modifying RNA in the sample to contain at least one substituent of a 2'-OH of the ribose rings; and

(c) a separation system for isolating RNA.

USE - The method can be used to separate all types of RNA, including mRNA, tRNA, rRNA, from other cellular components, e.g. proteins, carbohydrates, and lipids. The methods can also be used for separation of RNA from DNA, which can pose difficulties difficulties in prior art because of structural similarity. The sample input may be from various biological sources, e.g. animals (including humans), plants, viruses and viroids, or may be a synthetic RNA. Notably, detection of RNA viruses, including hepatitis C virus (HCV) and human immunodeficiency virus (HIV), for diagnostic purposes, requires viral genomic RNA to be isolated in an intact and relatively pure form.

ABSTRACTED-PUB-NO: WO 200075302A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/2

DERWENT-CLASS: B04 D16
CPI-CODES: B04-B01B; B04-E01; B04-N04; B11-C08; B12-K04A; D05-H06; D05-H13;

10031636

```
> s modif#### (10a)RNA(10a)(separat### or isolat###)
L1          231 MODIF#### (10A) RNA(10A)(SEPARAT### OR ISOLAT###)

=> s l1 and hydroxyl
L2            1 L1 AND HYDROXYL

=> d l2 bib ab kwic

L2   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2000:881292  CAPLUS
DN   134:39163
TI   Isolation of RNA by differential labeling of the ribose moiety with an
     affinity label
IN   Goldsborough, Andrew Simon
PA   Cyclops Genome Sciences Ltd., UK
SO   PCT Int. Appl., 71 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 3
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
     ---------------    ----  --------       ---------------  --------
PI   WO 2000075302      A2    20001214       WO 2000-GB1684   20000502
     WO 2000075302      A3    20010426
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
             CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
             ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
             LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
             SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,
             ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     WO 2001094626      A1    20011213       WO 2000-GB1683   20000502
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
             CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
             ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
             LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
             SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,
             ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     EP 1177281         A2    20020206       EP 2000-929666   20000502
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     EP 1196631         A1    20020417       EP 2000-929665   20000502
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     US 2003039985      A1    20030227       US 2001-11495    20011026
PRAI GB 1999-10154      A     19990430
     GB 1999-10156      A     19990430
     GB 1999-10157      A     19990430
     GB 1999-10158      A     19990430
     WO 2000-GB1683     W     20000502
     WO 2000-GB1684     W     20000502
AB   A method of purifying RNA from a mixt. of nucleic acids including DNA that
     makes use of the difference in the sugar moiety of the nucleic acid
     backbone is described.  A sample is treated with a reactant capable of
     covalently modifying the 2'-OH position of the ribose rings of the RNA
     under conditions so that a proportion of the 2'-OH positions of the ribose
     rings bear a substituent followed by sepn. of RNA from other contaminants
     on the basis of a property of the substituent.  The use of alkyl groups to
     modify the backbone of the RNA for capture on a hydrophobic surface, such
```

as a modified agarose, after salting out with ammonium sulfate is demonstrated.

IT Fluoropolymers, uses
Glass, uses
RL: DEV (Device component use); USES (Uses)
(affinity medium for purifn. of backbone-**modified RNA** ; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)

IT Alkali metal chlorides
RL: MOA (Modifier or additive use); USES (Uses)
(in salting out of backbone-**modified RNA**; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)

IT Petroleum products
(light oils, non-polar solvent for desorption of of backbone-**modified RNA**; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)

IT **Hydroxyl** group
(modification in ribose moiety of RNA of; isolation of RNA by differential labeling of ribose moiety with affinity label)

IT Salting-out
(of backbone-**modified RNA**; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)

IT 7631-86-9, Silica, uses 24937-79-9, Polyvinylidene difluoride 68679-38-9, Ethyl agarose 120037-82-3, Agarose, dodecyl ether
RL: DEV (Device component use); USES (Uses)
(affinity medium for purifn. of backbone-**modified RNA** ; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)

IT 98-88-4D, Benzoyl chloride, reaction products with polymer beads
RL: DEV (Device component use); USES (Uses)
(for capture of backbone-**modified RNA**; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)

IT 7487-88-9, Magnesium sulfate, uses 7778-18-9, Calcium sulfate 7783-20-2, Ammonium sulfate, uses
RL: MOA (Modifier or additive use); USES (Uses)
(in salting out of backbone-**modified RNA**; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)

IT 71-43-2, Benzene, uses 108-88-3, Toluene, uses 109-66-0, Pentane, uses 110-54-3, Hexane, uses 110-82-7, Cyclohexane, uses 1330-20-7, Xylene, uses
RL: MOA (Modifier or additive use); USES (Uses)
(non-polar solvent for desorption of of backbone-**modified RNA**; **isolation** of **RNA** by differential labeling of ribose moiety with affinity label)